

### **Summary of the Office Action**

1. Guidelines for the preferred layout and content for patent applications were suggested.
2. The specification was objected to for not having a “Brief Description of the Drawings” section.
3. Claims 15-30 were rejected under 35 U.S.C. § 112, 2nd paragraph as being indefinite for failing to distinctly claim the subject matter which Applicants regard as their invention.
4. Claims 15-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dubreil *et al.* Specifically, the Office Action indicated that it would have been obvious to one of ordinary skill in the art to modify the method of Dubreil *et al.* to add puroindolines to biscuit products as opposed to adding puroindolines to wheat flour used in breadmaking.

### **Response to the Office Action**

The specification was objected to for not containing a “Brief Description of the Drawings” section. Applicants have corrected this error in the present Amendment. In addition, the application as submitted did not contain an “Abstract” section. In response, Applicants have provided an abstract on a separate piece of paper as required by 37 C.F.R. § 1.72(b).

### **Rejections based on 35 U.S.C. § 112**

The Office Action rejected claims 15-30 under 35 U.S.C. § 112, 2nd ¶ purportedly because the claims as written were indefinite for failing to particularly point out and distinctly claim the subject matter. The phrase “the final baked product” in claim 15 was objected to because the Examiner stated that the claim did not set forth any baked product. In addition, the phrase “the other ingredients” in claim 15 was objected to because the Examiner stated that the phrase was not clear as the claim did not set forth any other ingredients. In response, Applicants have amended claim 15 to exhibit the invention in Jepson format. Furthermore, additional claims 31 and 32 were added to set forth the distinct embodiments of the original claim 15. Applicants contend that the amendments to the claims overcome the claim rejections based on 35 U.S.C. § 112, 2nd ¶ and respectfully request the rejections be withdrawn.

**Rejections under 35 U.S.C. § 103(a)**

Claims 15-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dubreil *et al.* Applicants respectfully disagree with the grounds for the rejection.

The Office Action stated that Dubreil *et al.* teach the addition of puroindolines to wheat flour used in breadmaking and that puroindolines can induce changes in the structure of grain crumb and bread volumes. While Dubreil *et al.* does teach that the addition of puroindolines modifies the rheological properties of the dough and the structure of the bread crumb, resulting in a variation in the bread density, the variation in density is not a direct function of the addition of the puroindolines. The variation in the bread density depends on other parameters, in particular the baking quality of the flour used (see for example the “Effect of Puroindolines on Grain Crumb and Bread Volume” section of the results in Dubreil *et al.*).

Dubreil *et al.* actually shows that the effects of puroindolines are highly unpredictable. A decrease in bread volume of about 10% is observed when puroindolines are added to flour with good baking quality, and decrease in bread volume of about 20% is observed if puroindolines are added to flour with poor baking quality. One would have expected an intermediate decrease in bread volume upon the addition of puroindolines to a mixture of flour with good baking quality and flour with poor baking quality. In contrast, an increase in bread volume of about 20% was observed in this case (see page 227 of Dubreil *et al.*).

The present invention claims the use of puroindolines in the manufacture of biscuits. The dough used in biscuit manufacturing is far more complex than bread dough, as biscuit dough comprises many other ingredients such as added proteins, carbohydrates and/or lipids. Therefore, Dubreil *et al.* would not have been able to predict the effect of puroindolines on biscuit dough. In particular, the fact that the addition of puroindolines always increased the firmness of the biscuits independent from their initial composition or the process of making them would not have been an expected result from Dubreil *et al.* This is especially true in light of the fact that Dubreil *et al.* teaches that there is an inverse relationship between bread hardness and puroindoline content since hard breads contained either no or a small amount of puroindolines. Therefore, Applicants respectfully request that the rejections of claims 15-30 based on 35 U.S.C. § 103(a) be withdrawn for the reasons stated in the aforementioned remarks.

**Conclusion**

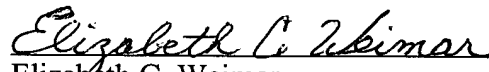
The foregoing amendments and remarks are being made to place the application in condition for allowance. Applicants respectfully request reconsideration and the timely allowance of the pending claims. A favorable action is awaited. Should the Examiner find that an interview would be helpful to further prosecution of this application, they are invited to telephone the undersigned at their convenience.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made" as required.

**Except** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **Constructive Petition for Extension of Time** in accordance with 37 C.F.R. 1.136(a)(3).

Respectfully submitted,  
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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Specification:**

**The paragraph beginning on page 14, line 27 has been replaced with the following paragraph:**

The results are illustrated by figure 8 [6] which represents the variation in the mean force ( $F_{\text{mean}}$ ) during storage, for the biscuits obtained from flour without endogenous puroindoline (◆), or from flour without endogenous puroindoline, supplemented with 0.1% (by weight relative to the weight of the flour) of purified puroindolines (■).

**In the claims:**

**Claims 15, 16, 21-25 have been amended as follows:**

15. A method of ~~[controlling the texture and/or the density of a biscuit]~~ **making biscuit dough wherein the improvement** comprises ~~[ing]~~ **admixing the biscuit flour with** ~~[combining an amount of]~~ at least one puroindoline;

**wherein the at least one puroindoline is added in an amount effective for** ~~[modifying the texture and/or the density of the final based product with at least one of the other ingredients prior to baking]~~ **increasing the firmness of the biscuit resulting from baking the biscuit dough.**

16. The method of claim 15 wherein the amount of puroindoline is between 0.02 and 5% by weight relative to the weight of the **biscuit** flour.

21. The method of claim 31 [20] wherein the amount of puroindoline is effective to reduce the density of a hard biscuit prepared from a **biscuit** dough with a fat content of between 2 and 20% of the total weight of the **biscuit** dough.

22. The method of claim 31 [20] wherein the amount of puroindoline is effective to reduce the density of a soft biscuit prepared from a **biscuit** dough with a fat content of between 2 and 30% of the total weight of the dough.

23. The method of claim 31 [20] wherein the amount of puroindoline is effective to reduce the density of a puff biscuit prepared from a **biscuit** dough with a fat content less than or equal to 4% of the total weight of the **biscuit** dough.

24. The method of claim 32 [20] wherein the amount of puroindoline is effective to increase the density of a puff biscuit prepared from a **biscuit** dough without added emulsifier and which **biscuit** dough has a fat content greater than or equal to 7% of the total weight of the **biscuit** dough.

25. **The method of claim 15 wherein the biscuit flour has** [~~A method of increasing the firmness of a biscuit comprising a flour with~~] a puroindoline content greater than 0.2% of the dry weight of the flour with the additional biscuit ingredients.